

Amendments to the Specification:

Please replace the paragraph beginning at page 22, line 17, with the following rewritten paragraph:

Laser diode 35 generates a beam of left circularly polarized light which pumps atomic vapor in cell 32 to maximize the left end resonance. Laser diode 36 generates a beam of right circularly polarized light which pumps atomic vapor in cell 34 to maximize the right end resonance. Laser diode 35, 36 can also be used to generate light modulated at a Bohr frequency of the end resonances.

Please replace the paragraph beginning at page 22, line 21, with the following rewritten paragraph:

Control signal designed to cause a change in state of the atoms in cell 32 is applied as to input 37. Control signal designed to cause a change in state of the atoms in cell 34 is applied as input 38. Control signals can be generated by a frequency oscillator and hyperfine resonance lock loop. Alternatively, control signals can be generated by applying a magnetic field oscillating at a Bohr frequency of the end resonances and pumping the atoms with circularly polarized D₁ resonance light. Photo detectors 39 and 40 detect radiation from respective cells 32 and 34.